

IN THE CLAIMS

Claims 1-2 (Canceled)

3. (Canceled)

4. (Canceled)

Claims 5-11 (Canceled)

12. (New) An image sensor, comprising:
- an array of pixels comprising a column of pixels;
 - a pixel column output line coupled to the column of pixels;
 - a first switch coupled to the pixel output line;
 - a capacitor coupled to the first switch;
 - a first crossbar switch having a first input coupled to the pixel column output line and a second input coupled to the capacitor, wherein the first crossbar switch has a first output and a second output;
 - a first column amplifier having an input coupled to the first output of the first crossbar switch, wherein the first column amplifier has an output;
 - a second column amplifier having an input coupled to the second output of first crossbar switch, wherein the second column amplifier has an output;
 - a first bus line coupled to the output of the first column amplifier;
 - a second bus line coupled to the output of the second column amplifier;
 - a second crossbar switch coupled to the first and second bus lines; and
 - an output amplifier coupled to the second crossbar switch.

13. (New) The image sensor of claim 12, further comprising:

a second switch coupled between the output of the first column amplifier and the first bus line; and

a third switch coupled between the output of the second column amplifier and the second bus line.

14. (New) The image sensor of claim 12, wherein the first and second crossbar switches are configured to operate synchronously.

15. (New) The image sensor of claim 14, wherein the first and second crossbar switches are modulated.

16. (New) The image sensor of claim 15, an array of pixels comprises rows of pixels, and wherein the first and second crossbar switches are switched at each of the rows of the pixels.

17. (New) The image sensor of claim 12, wherein a first signal stored on the capacitor goes to the input of one of the first and second column amplifiers and wherein a second signal on the pixel column output line goes to the input of the other one of the first and second column amplifiers.

18. (New) A method of operating an image sensor having an array of pixels, comprising:

storing a first signal on a memory element of the image sensor,
receiving a second signal on pixel column output line of an image sensor; and
synchronously switching between outputting the first signal and the second signal.

19. (New) The method of claim 18, further comprising modulating the synchronous switching at each of row of the array of pixels.

20. (New) The method of claim 18, wherein the memory element comprises a first switch coupled to a capacitor, the switch being coupled to the pixel column output line.

21. (New) The method of claim 20, wherein the synchronous switching is performed using first and second crossbar switches, the first crossbar switch having a first input coupled to the pixel column output line and a second input coupled to the capacitor, wherein the first crossbar switch has a first output and a second output, wherein the first output of the first crossbar switch is coupled to a first column amplifier, wherein the second output of the first crossbar switch is coupled to a second column amplifier, the first and second output amplifiers being coupled to first and second bus lines, respectively, and wherein the second crossbar switch is coupled to the first and second bus lines.

22. (New) An image sensor, comprising:
an array of pixels comprising a plurality of pixel columns; and
means for generating an average offset of each of the plurality of pixel columns to be substantially zero using a plurality of crossbar switches.

23. (New) The image sensor of claim 22, wherein the plurality of crossbar switches are configured to be switched synchronously.